

REMARKS

Applicants respectfully request reconsideration of this application. Claims 1-24 are pending. No claims have been amended, canceled or added.

Claims 1, 2, 5, 9, and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yamaguchi (US 6,847,743 B2) in view of Ryhorchuk, et al. (US 7,113,698 B1). Applicant does not admit that Ryhorchuk is prior art and reserves the right to swear behind either reference at a later date. Applicant respectfully traverses the rejection.

According to Yamaguchi, when any failure occurs in the current system, the controlling circuit outputs a control signal to the switch driving circuit to switch the optical switches 14-1 and 14-2 to OFF and ON states, respectively, and at the same time, outputs a control signal to switch the scrambler driving circuits 11-1 and 11-2 to OFF and ON states, respectively. As a result, the operation switches from the current system to the auxiliary system. (Yamaguchi, col. 5, ln. 33-43).

Ryhorchuk discloses a system for detecting faults in an optical network have switching nodes and amplifier nodes (Ryhorchuk, Abstract). Upon detecting a fault, the amplifier node sends a fault report to a switching node, where the switching node attempts to restore traffic based on the fault report by re-routing the traffic around the failed node (Ryhorchuk, Abstract, col. 13, lines 9-26). If this switching node does not restore the traffic, the switching node creates a fault report of component within that switching node that may have failed (Ryhorchuk, col. 13, lines 9-15). The switching node sends this fault report to other nodes (Ryhorchuk, col. 13, lines 17-26).

Claim 1 sets forth:

if both of the first and the second outgoing optical signals have failed,
determining a failure is outside of the optical network node, and
maintaining a signal selection state of the switch to continue outputting
the only one of the first and the second outgoing optical signals in the same
direction without *declaring that the optical network node has failed*.

(Claim 1; emphasis added)

The Examiner admits that Yamaguchi fails to teach the above limitation. Instead, the Examiner relies on Ryhorchuk to disclose the missing element. However, instead of determining that a failure occurred outside the optical network node, Ryhorchuk discloses that a node advertising a list of components in that node that could have failed. Thus, Ryhorchuk discloses advertising node component that may have failed and not determining that a failure has occurred outside that optical node. Furthermore, there is no section of Ryhorchuk that teaches or suggest that if both optical signals fail, not only maintaining a signal selection state of the switch, but also *without declaring that the optical network node has failed*. The section of Ryhorchuk cited by the Examiner as disclosing this element instead discloses nodes sending fault reports of potential failed components to other nodes. This section, however, does not teach or suggest maintaining the optical selection state of a node or whether the optical node is in a failed state. Furthermore, there is no other section of Ryhorchuk that teaches or suggests that if both optical signals fail, not only maintaining a signal selection state of the switch, but also without declaring that the optical network node has failed as claimed in claim 1.

The Examiner further asserts that “it makes no difference to the system output by changing or maintaining the state of the switch, and therefore would be no point of switching to the auxiliary system or to the current system.” Applicant respectfully

disagrees. As known in the art, if a node is in the failed state, then traffic will be re-routed around that failed node. For example, see Ryhorchuk, when a node announces that it has failed, a fault event report is sent to other node(s) and these node(s) route traffic around the failed node (Ryhorchuk, col. 13, lines 9-26). Thus, by not changing to a failed state traffic would not be routed around the node. Furthermore, one of skill in the art would recognize that maintaining a state selection state instead of putting the node in a failed state would enable the node to recover more quickly should the traffic be restored to the node. Thus, Applicant respectfully submits that the claim element of maintaining a signal selection state of the switch does matter and Applicant further requests the Examiner to examiner this claim element.

Because the combination of Yamaguchi and Ryhorchuk fails to teach all limitations set forth all limitations of claim 1, claim 1 is patentable over the combination. Withdrawal of the rejection is respectfully requested.

Claim 9 is patentable over Yamaguchi and Ryhorchuk for at least the reason discussed above with respect to claim 1. Claims 2, 5, and 10 depend from claims 1 and 9, respectively, and thus, are also patentable over Yamaguchi and Ryhorchuk. Withdrawal of the rejection is respectfully requested.

Claims 3, 4, 11, and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yamaguchi in view of Ryhorchuk and further in view of Palacharla et al. (US 2004/0141741 A1). Applicant respectfully traverses the rejection. Claims 3, 4, 11, and 12 depend from claims 1 and 9, respectively, and thus, include all limitations set forth in their respective base claims. For the reason discussed above with respect to claim 1, Yamaguchi and Ryhorchuk fail to teach that if both the first and second optical signals fail, determining a failure is outside the optical network node and not only maintaining a

signal selection state of the switch, but also *without declaring that the optical network node has failed*. Moreover, Palacharla also fails to teach the above limitation. Palacharla discloses if a failed signal has been sent or received from the optical equipment, a transponder failure alarm is generated (Palacharla, para. [0041]). Palacharla does not teach determining the failure is outside the optical network node and maintaining a signal selection state of the switch to continue outputting the only one of the first and the second outgoing optical signals in the same direction without declaring that the optical network node has failed if both of the first and the second outgoing optical signals have failed. Because none of Yamaguchi, Ryhorchuk or Palacharla, alone or in combination, teaches all limitations set forth in claims 3, 4, 11, and 12, claims 3, 4, 11, and 12 are patentable over Yamaguchi in view of Ryhorchuk and Palacharla. Withdrawal of the rejection is respectfully requested.

Claims 6-8 and 13-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yamaguchi, Ryhorchuk, and Kuroyanagi et al. (US 6,433,900 B1). Applicant respectfully traverses the rejection. Claims 6-8 depend from claim 1, and thus, include all limitations set forth in their respective base claim. For the reason discussed above with respect to claim 1, Yamaguchi and Ryhorchuk fail to teach if both the first and second optical signals fail, determining a failure is outside the optical network node and not only maintaining a signal selection state of the switch, but also without declaring that the optical network node has failed. Moreover, Kuroyanagi also fails to teach the above limitation. Kuroyanagi discloses a system comprising XC Node o-system, XC Node 1-system, optical distributor 50, and a protection switch 61 (Kuroyanagi, Figure 8A). Kuroyanagi does not teach if both the first and second optical signals fail, determining a failure is outside the optical network node and not only maintaining a signal selection

state of the switch, but also without declaring that the optical network node has failed.

Because none of Yamaguchi, Ryhorchuk, or Kuroyanagi, alone or in combination, teaches all limitations set forth in claims 6-8, claims 6-8 are patentable over the combination. Withdrawal of the rejection is respectfully requested.

Claim 13 sets forth:

a plurality of optical signal switches, each of the plurality of the optical signal switches coupled to one of the first plurality of output ports and one of the second plurality of output ports, to select a first output optical signal from the first optical equipment, wherein a respective optical signal switch switches to select a second output optical signal from the second optical equipment if the first output optical signal fails and the second output optical signal has not failed, and ***if both of the first and the second outgoing optical signals have failed, to determine a failure is outside of the optical network node***, and a signal selection state of the respective optical signal switch remains unchanged to continue selecting the first output optical signal to output in the same ***direction without declaring that the optical network device has failed***, wherein the plurality of optical signal switches are switched together substantially simultaneously.

(Claim 13; emphasis added)

For similar reasons described above, the combination of Yamaguchi, Ryhorchuk, and Kuroyanagi does not teach or suggest the above limitation. Because none of Yamaguchi, Ryhorchuk, or Kuroyanagi, alone or in combination, teaches all limitations set forth in claim 13, claim 13 is patentable over Yamaguchi in view of Kuroyanagi. Withdrawal of the rejection is respectfully requested.

Claim 19 is patentable over the combination of Yamaguchi, Ryhorchuk, and Kuroyanagi for at least the reason discussed above with respect to claim 13. Claims 14-18 and 20-24 depend from claims 13 and 19, respectively, and thus, are also patentable over the combination of Yamaguchi, Ryhorchuk, and Kuroyanagi. Withdrawal of the rejection is respectfully requested.


CONCLUSION

Applicant respectfully submits that the rejections have been overcome by the amendments and the remarks, and that the pending claims are in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the pending claims be allowed.

Pursuant to 37 C.F.R. §1.136(a)(3), Applicant hereby requests and authorizes the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,
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